VT CHIP

Vermont Cattle Health Improvement Program

RAMP WORKBOOK

Herd Code:_____

Date Due:_____

4/30/15

CONTENTS:

INSTRUCTIONS:

1. **Complete <u>all</u> the forms in the order in which they appear in the workbook. When working with herds in the certification level program, the completed workbook should be submitted to the Designated Johne's Coordinator (DJC), otherwise send RAMP to the State Animal Health Official at the Vermont Agency of Agriculture, Food and Markets.**

   Dr. Julie Smith
   University of Vermont
   570 Main Street
   Terrill Building
   Burlington, VT 05405

2. **Diagnostic samples for certification level herds must be submitted to an accredited laboratory. Copies of test results must be forwarded to the DJC.**

OBJECTIVES:

The goal of the Vermont Cattle Health Improvement Program (VTCHIP) is to engage veterinarians and producers in a systematic process of evaluating herd health concerns and developing management strategies to address identified risks. While Johne's disease is the specific disease of concern, the process offers an important opportunity to discuss farm goals, evaluate the current health status of the herd, and to identify herd health priorities other than Johne's that may be limiting performance.

This workbook contains tools specifically designed to assist with evaluating the herd's status and risk for Johne's disease by investigating the history of Johne's in the herd, estimating herd prevalence, and conducting a management area walk-through risk assessment. The final steps are developing a customized herd plan identifying specific management practices that can be implemented to prevent or control the disease on the farm and designing a testing strategy that is best suited to meet herd goals. The veterinarian and producer are encouraged to involve farm personnel, extension agents, other veterinarians or other industry representatives in the process to enrich discussion and decision-making. The objective of this part of the process is to identify strategies for the producer to consider and prioritize, establish a time frame for accomplishing them, and review and update them on a regular basis.

Vermont Cattle Health Improvement Program

Herd information, owner goals and general biosecurity

Herd Code:	**Completed by:**	**Date:**
Farm Name (optional):	**Conventional / Organic**	**Breed(s):**
Key farm decision makers, employees, advisors		

Dairy Herd Inventory

Cows: Lactating____ Dry____ **Heifers**: On milk____ Growing/Open____ Bred____ **Bulls**____ **Steers**____

Farm Goals

Do you plan to be dairy farming in 5 years?

Do you anticipate any changes to the farm operation (e.g., expansion or diversification)?

Do you market cattle? Will you in the future?

Describe short and longer-term owner goals or priorities for the farm. Some examples are herd size, animal health and performance, facilities, marketing animals, business / employee management, family goals, environmental issues, markets, milk quality, beef quality or other.

Short-term (this year)

Long-term (3 to 5 years)

What are your top 3 to 4 overall concerns for your operation?	
What herd health improvements are you making or plan to make?	
What management and/or facilities issues are you addressing or plan to address?	

Replacements	
Describe current and future source(s) of replacements or additions.	
What health requirements do you have for replacements?	
If replacements are raised elsewhere, what do you do to protect herd health (biosecurity)?	

Animal Identification	**Type of Record System**	**Treatment Records**
Are animals uniquely identified?	DHI	Are all treatments recorded?
	PCDART DC305	
	Other computer:	Written?: Notebook Board
ID type-cows:	Written:	Computer:
ID type-youngstock:	Other:	Other:

Vaccination Program: Written protocols?	**Date last reviewed:**
Cows	Youngstock

Current Herd Health Status and Concerns

This is a general review of health and management issues that influence herd performance and profitability. Specify incidence or assess level of concern by circling U, 1, 2 or 3 next to each item. Johne's disease management should be approached with other herd issues and concerns in mind.

***U** = unknown incidence or concern*
***1** = low incidence, not a current concern*
***2** = Moderate incidence, may be a concern (+ /-)*
***3** = Significant incidence, unsatisfactory, needs attention or is current priority*

Calf Feeding Practices
Average hours to first colostrum harvest [ ]
Average hours to first colostrum fed [ ]
Amount of first colostrum fed [ ]
Colostrum source: ___ Individual ___ Pooled
Total number of colostrum feedings [ ]
What is fed after colostrum? Unpasteurized milk ___ Pasteurized milk ____ Milk replacer ____ Comments (waste/saleable, pooled/individual):
Describe routine for keeping calf feed and feeding equipment sanitary:

Calf Health and Level of Concern				
Pre-wean mortality (last 12 mo.) [ ]	U	1	2	3
Calf vigor	U	1	2	3
Calf growth	U	1	2	3
Scours	U	1	2	3
Pneumonia	U	1	2	3
Other:	U	1	2	3

Heifer Health and Level of Concern				
Heifer growth	U	1	2	3
Breeding program	U	1	2	3
Age at freshening [ ]	U	1	2	3
Pneumonia	U	1	2	3
Digital dermatitis	U	1	2	3
Coccidiosis	U	1	2	3
Other:	U	1	2	3

Milk Production, Quality / Udder Health				
Bulk Tank SCC [ ]	U	1	2	3
Bacteria Count / SPC [ ]	U	1	2	3
Mastitis cases per mo. [ ]	U	1	2	3
Milk culture protocols (bulk tank, cases, fresh, other?): Recent culture and sensitivity results:				
Milk/cow/day	Fat%	Protein%		

Reproductive Program				
Heat Detection Rate [ ]	U	1	2	3
Conception Rate [ ]	U	1	2	3
Pregnancy Rate [ ]	U	1	2	3
Herd Average DIM [ ]	U	1	2	3
Abortions / year (% herd) [ ]	U	1	2	3
Embryonic Loss?	U	1	2	3
AI or Natural Service?				

Lameness Incidence and Level of Concern				
% cows with obvious lameness [ ]	U	1	2	3
Digital dermatitis	U	1	2	3
Laminitis	U	1	2	3
Abcesses	U	1	2	3
Foot Rot	U	1	2	3
Other:	U	1	2	3
Foot trimming program:				

Metabolic Disorder Incidence and Concern (Fresh cows last 3 – 6 months)				
Milk Fever	U	1	2	3
Retained Placenta	U	1	2	3
Ketosis	U	1	2	3
Mastitis	U	1	2	3
Metritis	U	1	2	3
DAs	U	1	2	3
Fatty Liver	U	1	2	3
Acidosis	U	1	2	3
Stillborns / Dystocia	U	1	2	3
Other:	U	1	2	3

Infectious Disease Incidence or Level of Concern				
Johne's disease	U	1	2	3
Salmonellosis	U	1	2	3
Neosporosis	U	1	2	3
BVD	U	1	2	3
Respiratory disease	U	1	2	3
BLV	U	1	2	3
Clostridial disease	U	1	2	3
Leptospirosis	U	1	2	3
Other:	U	1	2	3

Culling				
Cull Rate % last 6 or 12 months [ ]	U	1	2	3
Approximate number culled by reason:				
< 60 DIM [ ]	U	1	2	3
Deaths [ ]	U	1	2	3
Mastitis [ ]	U	1	2	3
Reproduction [ ]	U	1	2	3
Lameness [ ]	U	1	2	3
Low production [ ]	U	1	2	3
Udder [ ]	U	1	2	3
Injury [ ]	U	1	2	3
Metabolic dis. [ ]	U	1	2	3
Infectious dis. [ ]	U	1	2	3
Other:	U	1	2	3

Summarize main health concerns & priorities.
There is no such thing as "just a Johne's plan". Consider, prioritize and integrate other important farm issues into the Herd Management Plan.

Herd Code:	Farm Name (optional):	Date:
Veterinarian: Phone:	Facilitator (if applicable):	First or Follow-up RAMP?

Part A. Herd History

What year was this herd started or assembled? _____ (from previous if follow-up RAMP)

How long has the herd been on these premises? _____

What % of the current herd was not born in the herd but was acquired or purchased? _____

What % of the current herd was born **and raised** on the premises? _____

What % of those born in the herd was raised elsewhere? _____

Were those animals commingled with animals from other farms? Yes No

If yes, did that include any exposure to adult animals? Yes No

Has Johne's disease ever been diagnosed or suspected in the herd? Yes No

What year was the first suspected case of Johne's? _____ Raised or purchased? (circle)

Part B. Imported Cattle

(complete history through previous record if completing follow-up RAMP)

List approximate number or groups of cattle introduced to the herd last year and 2-5 years prior. Were source and status known (e.g., a farm, published sale, etc.) or unknown (e.g., auction, dealer, salebarn)?

Group	Last 12 months	Source	Status	2-5 years ago	Source	Status
Cows						
Heifers						
Calves						
Bulls						
Total						

How many additions came from known sources? _____ from unknown sources? _____

How many sources had a known Johne's disease status? _____

Were any cattle tested for Johne's or other diseases before or after purchase? Yes No

Describe:

What is the likely risk of having introduced Johne's disease to the herd from imported animals?

None		Low		Moderate		High
0	1	2	3	4	5	6

No imports,
Imports from low-risk herds

Many imported animals of unknown herd status or from poorly managed herds

Johne's Disease Risk Assessment

Part C. Clinical Case History of Johne's Disease

List cattle that you know or strongly suspected had Johne's disease based on clinical signs starting with the most recent and working back. Note if cattle were raised in the herd (R) or acquired (A). This will help assess disease time line and progression in the herd.

ID	Date	Age	R / A	Tested?	ID	Date	Age	R / A	Tested?

What age was the oldest animal with clinical Johne's? _____ Raised or purchased? (circle)

What age was the youngest animal with Johne's? _____ Raised or purchased? (circle)

What percent of the adult herd was clinical Johne's cases for the past year? _____

What percentage of total culls for the past year were clinical Johne's cases? _____

Case Summary: Tally the number of diagnosed and/or suspected clinical cases for the last 12 months.

	1st lactation or younger	2nd lactation or older	Total	As a % of cow herd
No. raised				
No. acquired				

For any testing that has been done during the previous year, what is the estimated test prevalence?
ELISA+ _____ / Total Tests _____ = Fecal+_____/ Total Fecals _____ =

Part D. Herd Prevalence Estimate

None **Low** **Moderate** **High**

0 1 2 3 4 5 6

Place an X on the line above where you estimate herd prevalence of Johne's disease might be. Consider number, age, source, time frame of clinicals. The table below provides guidance.

Low (1-2)	Moderate (3-4)	High (5-6)
• No or rare clinical cases • Cases only in purchased animals • ~< 5% test prevalence mostly in older animals • Excellent management and sanitation	• Occasional clinical cases in home-reared animals • Recent history of 2-5% clinicals/year • ~6-19% test prevalence overall • Management allowed for some exposure of young stock to manure of older animals	• Frequent cases in home-reared animals • Increasing clinical cases • Decreasing age of clinicals • ~> 20% test prevalence distributed across age groups • Severe risks exist for contact of young stock with manure of older animals

What is the relative impact of Johne's disease on the farm operation and goals? (Assess its impact on economic losses, culling, production, genetics, overall health, internal herd growth, etc.)

None **Low** **Moderate** **High**

0 1 2 3 4 5 6

Describe impacts:

Part E. Johne's Disease Area Assessment Score Sheet

Place the corresponding column number in the box to the right of the management practice that most closely signifies your subjective assessment of this farm's risk for that item. ***Consider the impact of the estimated prevalence of disease in the herd on risks (Higher prevalence → Higher score)***. Also consider how & when current management conditions differ from the past that may have impacted risks. Check boxes as applicable and provide explanations in space to the right.

Calving Area Describe calving area(s) (winter/summer):	0. No Risk	1.	2. Low	3.	4.	5. Moderate	6.	7.	8. High	9.	10. Very High	**Comments/Observations/Past Practices:** ***Describe calving conditions and management:***
1. Multiple animal use [*Single animal/Single pen* □ → *Group Pen* □] Avg # in group pen____ Spacious □ → Optimal □ → Overcrowded □												
2. Manure condition of environment, risk for calf ingestion [C*lean dry* □ → *Spotty* □ → *Dirty wet* □] Cleaned after each use □, daily □, weekly □, monthly □, rarely □												
3. Calving area also used for sick cows/hospital: [*Segregated calving area* □ → *Common hospital/calving area* □] [Never □ → *Sometimes* □ → *Often* □]												
4. Presence of Johne's high risk animals in maternity area [*Never* □ → *Sometimes* □ → *Often* □] (consider impact of estimated prevalence of disease in the herd)												
5. Manure soiled udders/legs [Clean □ → *Udders and legs dirty* □]												
6. Calves born in other cow areas [*Rarely* □ → *Sometimes* □ → *Often* □] _____%? Describe:												
7. Time calves stay with cows [*Minutes* □ → *Hours* □ → *1 Day or more* □] Avg time? _____ Range?: _____ to _____												
8. Calves nurse cows [Rarely □ → *Sometimes* □ → *Often* □] _____%?												

Estimate the likely risk for spreading Johne's in the calving area: **Low Moderate High Very High** **Score =** _____ (Max = 80)

Guide Questions and Notes:

Describe cleaning and bedding routines. How often is maternity area cleaned completely to the surface and bedding changed?

Map or diagram

Does calving management differ by season?

Johne's Disease Risk Assessment

Pre-Weaned Calves Describe housing: Hutches □, Individual stalls □, Group pens □, Calf raiser □	0. No Risk	1.	2. Low	3.	4.	5. Moderate	6.	7.	8. High	9.	10. Very High	**Comments. Obervations. Past Practices:** ***Describe colostrum and milk feeding practices:***
9. Source of colostrum fed: [*Single/individual cow* □ → *Pooled from multiple animals* □ *Pooled Never* □ → *Sometimes* □ → *Often* □]												
10. Johne's status of colostrum fed from: [*Known low risk cows* □ → *Unknown status* □ → *High risk cows* □] (consider impact of estimated prevalence of disease in the herd)												
11. Feeding of unpasteurized whole milk: [*Replacer* □, *Single low risk cow* □, or *Pasteurized* □ → *Pooled* □ *known status* □, *unknown status* □ and/*or high risk cows* □ *from* *bulk tank* □, *waste milk* □ - - *Rarely* □ → *Sometimes* □ → *Often* □]												
12.Possible manure contamination of colostrum or milk: [Rarely □ → *Sometimes* □ → *Often* □] at harvest □, nursing □, feeding □, utensils □, splatter □, people □												
13. Possible manure contamination of <u>feed</u> or <u>water</u>: [*Rarely* □ → *Sometimes* □ → *Often* □] by cows □, traffic □, splatter □, equipment □, people □ pond □, stream □, well □, spring □												
14. Direct calf to cow contact or manure contamination of pen: [*Never* □ → *Sometimes* □ → *Often* □] by cows □, traffic □, splatter □, equipment □, people □, drainage □ *Housed separately* □ → *Housed with or near adult cattle* □												

Estimate the likely risk for spreading Johne's in pre-weaned calves: **<u>Low</u> <u>Moderate</u> <u>High</u> <u>Very High</u>** **Score =** _____ (Max = 60)

Notes:

<u>Map or diagram</u>

Johne's Disease Risk Assessment

Post-Weaned Heifers Describe housing (winter/summer): Individual stalls □, Group pens □, Pasture □, Heifer raiser □	0. No Risk	1. Low	2.	3.	4. Moderate	5.	6.	7. High	**Comments, Observations and Past Practices:** ***Describe sources of potential manure contamination of feed, water and environment***
15. Direct contact with cows or cow manure [*Never* □ → *Sometimes* □ → *Always* □] Housed separately □ or Housed with or near adult cattle □									
16. Manure contamination of feed: refused cow ration □, stored feed □, cows □, equipment □, traffic □ splatter □, people □, runoff □, crossover alleys □, fed off ground □									
17. Potential contamination of supplied or natural water: [*Never* □ →*Sometimes* □ →*Often* □] by cows □, splatter □, runoff □, equipment □, low height □ pond □, stream □, well □, spring □									
18. Share pasture with cows [*Never* □ → *Sometimes* □ → *Often* □] Minimum age: _____ Manure accumulation in pasture: Small□ → Moderate□ → Heavy□									
19. Manure spread on hay, pasture or forages grazed or harvested same season. Manure spread how close to harvest or grazing? _____									Outside manure spread of unknown source or status?

Estimate the likely risk for spreading Johne's in post-weaned heifers: **Low Moderate High** **Score =** _____ (Max = 35)

Guide Questions and Notes:

Map or diagram

Is there feeding of leftovers from cow ration? If so, to how young?

Is equipment used for handling manure also used for feed?

Is equipment and traffic for adult manure handling shared w/ youngstock areas?

What are sources of water and how is it delivered? Any potential for contamination?

Is there feeding off the ground in concentrated areas?

Assess overall manure condition of environment and sanitation:

Bred Heifers Describe housing (summer/winter): Individual stalls □, Group pens □, Pasture □, Heifer raiser □	0. No Risk	1. Low	2.	3. Moderate	4.	5. High	**Comments. Observations and Past Practices:** ***Describe sources of potential manure contamination of feed, water and environment***
20. Direct contact with cows or cows' manure [*Never* □ → *Sometimes* □ → *Always* □] Housed separately □ or Housed with/near adult cattle/dry cows □							
21. Manure contamination of feed: refused cow ration □, stored feed □, cows □, equipment □, traffic □ splatter □, people □, runoff □, crossover alleys □, fed off ground □							
22. Possible contamination of supplied or natural water: [*Never* □→*Sometimes* □→*Often* □] by cows □, splatter □, runoff □, equipment □, low height □ pond □, stream □, well □, spring □							
23. Share pasture with cows [*Never* □ → *Sometimes* □ → *Always* □] minimum age?_____ Manure accumulation in pasture: Small□→ Moderate□→ Heavy□							
24. Manure spread on hay, pasture or forages grazed or harvested same season. Manure spread how close to harvest/grazing? _____							Outside manure spread from unknown source or status?

Estimate the likely risk for spreading Johne's in bred heifers: **Low Moderate High** **Score =** _____ (Max = 25)

Guide Questions and Notes:

Is there feeding of leftovers from cow ration? If so, to how young?

Map or diagram

Is equipment used for handling manure also used for feed?

What are sources of water and how is it delivered? Any potential for contamination?

Is there feeding off the ground in concentrated areas?

Assess overall manure condition of environment and sanitation:

Johne's Disease Risk Assessment

Cows Describe Housing (winter/summer)(dry/lactating): Free Stall □, Tie Barn □, Pasture □	0. No Risk	1. Low	2.	3	4. High	**Comments. Observations and Past Practices:** ***Describe sources of potential manure contamination of feed, water and environment***
25. Possible cow manure contamination of feed: when fed □, stored feed □, equipment □, traffic □, splatter □, runoff □, people □, crossover alleys □, fed off ground □						
26. Manure contamination of supplied or natural water by cows □, splatter □, runoff □, equipment □, low height □, pond □ Water troughs cleaned = daily □, weekly □, monthly □, >monthly □						
27. Direct access to accumulated or stored manure [*Never* □ → *Sometimes* □ → *Frequent* □] Manure accumulation in pasture: Small□→ Moderate□→ Heavy□						
28. Manure spread on hay, pasture or forages grazed or harvested the same season. Manure spread how close to harvest/grazing?						Outside manure spread from unknown source or status?

Estimate the likely risk for spreading Johne's in the cows: **Low Moderate High** **Score =** _____ (Max = 16)

Guide Questions and Notes:

Is there contamination of feed by traffic of equipment through manure, crossovers and cow alleys? Feeding off the ground?

Map or diagram

Is the same equipment used to handle manure also used for feed?

What are water sources and how is it delivered? Any potential for contamination?

Briefly describe manure management; how it is collected, removed and stored?

Assess overall manure condition of environment and sanitation:

Does the herd have a history of other fecal/oral disease such as salmonella?

Johne's Disease Risk Assessment

Part F. Risk Summary*

Summarize the Herd's Risk Scores	Herd Risk Areas	Maximum Score	Herd Score	Herd Score as % Maximum Score (HS/Max)	Herd Score as % Total Herd Score (HS/Total)
1.For each area, calculate the herd's score as: • A % of the maximum score. • A % of the herd's total score. 2. Sum the herd's Total Risk Score and as percent of the maximum. Your scores highlight higher risk areas to address in the farm plan.	Calving area	80			
	Pre-weaned calves	60			
	Post-Weaned heifers	35			
	Bred heifers	25			
	Cows	16			
	Total	**216**			100%

*Scoring may become valuable in comparison to previous or subsequent years assessments over time

Briefly summarize the risk factors of most importance identified in this assessment:

Calving area	
Pre-weaned Calves	
Post-weaned Heifers	
Bred Heifers	
Cows	
Imported Animals	
Biosecurity	
Other Health, Milk or Beef Quality, Herd Performance	

Johne's Disease Risk Assessment

Part G. Developing a Test Strategy for Johne's Disease

1. What is testing expected to accomplish and how does it relate to your goals (See part H)?

   - ☐ establish test negative herd status
   - ☐ determine if herd is infected
   - ☐ identify infected and/or high risk animals
   - ☐ evaluate clinical suspects and/or high risk animals
   - ☐ determine herd prevalence or level of risk
   - ☐ other:_____

2. How many and what type of animals will be tested by ELISA (more than one may apply)?

#	Type
	any/all lactating cows/whole herd
	≥2nd lactation or ≥ 36 months of age
	purchased additions
	clinical suspects
	confirmed pregnant
	at dry off
	random sampling/subset
	bulls
	other:
	Total

3. When and how often would you test?

   - ☐ all at once
   - ☐ monthly
   - ☐ weekly
   - ☐ as needed for clinical suspects or additions
   - ☐ other: _____

4. Will all ELISA positive animals be retested with an OJT? ____

5. Environmental sample sites for fecal culture:

6. Consider estimated test prevalence calculated in Part C.

7. How do you propose to use test results?

   - ☐ For calving/maternity management
   - ☐ For management of colostrum/milk feeding
   - ☐ For identification of infected, suspect or high risk animals
   - ☐ For do not breed/culling decisions
   - ☐ Segregation/separation/isolation of infected, suspect or high risk animals
   - ☐ Monitor herd infection status
   - ☐ Establish a herd classification level: _____
   - ☐ Other:

8. Annual Test Budget (Cornell pricing, 4/14)

Test	Estimated number/year	Projected cost
ELISA ($5)		
Individual PCR ($36.75)		
Individual Fecal Culture ($40.25)		
Pooled Fecal Cultures ($40.25)		
Est. FC pos. pools needing PCR of individual samples ($183.75)		
Total		

Johne's Disease Risk Assessment

Part H. Johne's Goals

What are your goals with regards to Johne's disease? (I = Immediate, L= long term)

I__ L__ Determine if infection is present in the herd
I__ L__ Determine better the extent or prevalence of infection in the herd
I__ L__ Reduce the number of clinical cases and/or infected animals in the herd to a low level
I__ L__ Eliminate infection from the herd
I__ L__ Prevent the introduction of infection into the herd
I__ L__ Establish an unofficial herd status as low risk
I__ L__ Establish an official status (US Voluntary JD Herd Status) as low risk
I__ L__ Other:

PART I. FORMULATING A HERD PLAN

The herd plan is developed from the risk assessment by formulating and prioritizing management procedures and strategies to mitigate the identified risks. *Strategies should be as specific as possible focusing on prevention as well as control and on potential risks as well as real risks.* The herd plan should attempt to assign responsibilities and, when appropriate, establish written standard operating procedures for disease management as well as identify appropriate testing strategies to meet herd goals. Use any format you choose to complete the herd plan.

Recommended management practices should focus on the following objectives:

- Keep calving area clean, dry and uncrowded, used preferably by one cow at a time and separate from sick cows.
- Avoid feeding infected colostrum or unpasteurized milk from unknown or high risk animals.
- Prevent exposure of calves/heifers to adult cows and their manure.
- Prevent fecal contamination of feed and water, especially that fed to calves and heifers.
- Prevent introduction of infected animals and animals of unknown health status to the herd.
- Promptly identify, segregate and manage or cull high-risk or infected animals.

Consider these criteria in negotiating what to include in the plan:

1. Do the recommended management practices:
   - benefit overall herd health, performance and other priorities?
   - target farm-specific risks, objectives and priorities (short and long term) for Johne's disease?

2. Are the recommended practices realistic for the herd owner and employees?
   - Are they feasible to implement given available resources and present situation?
   - Will they be effective or necessary in meeting herd goals and objectives?

3. How will the performance or benefits of the recommended practices be evaluated?

FEEDBACK:
Please make comments or suggestions regarding the workbook. How long did it take? _____

Usefulness: Excellent Good OK Not Useful

The herd plan is developed from the risk assessment by formulating and prioritizing management procedures to mitigate the identified risks. *Strategies should be as specific as possible focusing on prevention as well as control and on potential risks as well as real risks.* The herd plan should attempt to assign responsibilities and, when appropriate, establish written standard operating procedures for disease management as well as identify appropriate testing strategies to meet herd goals. Use any format you choose to complete the herd plan.

Recommended management practices should be focused on the following objectives:

- Keep calving area clean, dry and uncrowded, used preferably by one cow at a time and separate from sick cows.
- Avoid feeding colostrum or unpasteurized milk from high risk animals.
- Prevent exposure of calves/heifers to adult cows and their manure.
- Prevent fecal contamination of feed and water, especially that fed to calves and heifers.
- Prevent introduction of infected animals and animals of unknown health status to the herd.
- Promptly identify, segregate, and manage or cull high-risk or infected animals.

Consider these criteria in negotiating what you want to include in your plan:

1. Do the recommended management practices:
   - benefit overall herd health, performance and other priorities?
   - target your farm-specific risks, objectives and priorities (short- and long-term) for Johne's disease?

2. Are recommended practices realistic for you and employees?
   - Are they feasible to implement, given your resources and situation?
   - Will they be effective or necessary in meeting your objectives?

3. How will the performance or benefits of the recommended practices be evaluated?

What are your goals with regards to Johne's disease?

- ❑ Determine if I have the infection
- ❑ Reduce or eliminate the infection in my herd
- ❑ Prevent it from getting into my herd
- ❑ Establish an official low risk herd status
- ❑ Other:

Herd Plan

Date: _____ Herd Code: _____

Farm name (optional):

Page:____ of_____

Strategy or management practice to be implemented to reduce identified risks	Priority	Person Responsible
Testing Strategy:		